CLAIMS

1. A method for planning a radiocommunications network, comprising:

- computing cell coverage, to indicate a region around a radio base station (RBS) where a radioelectric signal radiating out from the radio base station (RBS) copes with given requirements;

wherein computing cell coverage comprises:

- dividing a region around said radio base station (RBS) into a number of first areas (LEP);

- for each first area (LEP), computing a first quantity indicative of the coverage within the first area (LEP) as a function of data describing the environment within first areas (LEP) along a propagation path of a radioelectric signal radiating out from said radio base station (RBS) and passing through said first area (LEP);

said method being characterized in that computing cell coverage further comprises:

- dividing at least some of said first areas (LEP) into a number of second areas (SEP); and

- for at least some of said second areas (SEP), computing respective second quantities indicative of the coverage within said second areas (SEP), each second quantity being computed for the respective second area (SEP) as a function of at least the first quantity computed for the first area (LEP) containing said second area (SEP) and of data describing the environment within said second area (SEP) and within at least some further second areas (SEP) within said first area (LEP) and arranged upstream said second area (SEP) along a radioelectric signal propagation path passing through said second area (SEP).

2. A method as claimed in claim 1, wherein each second quantity is computed for the respective second

area (SEP) also as a function of data describing the environment within some further second areas (SEP) arranged just outside the first area (LEP) containing said second area (SEP) and upstream said second area (SEP) along said radioelectric signal propagation path.

3. A method as claimed in claim 1 or 2, wherein each second quantity is computed for the respective second area (SEP) also as a function of the first quantities computed for first areas (LEP) surrounding the first area (LEP) containing said second area (SEP).

4. A method as claimed in claim 3, wherein in the computation of a second quantity for a respective second area (SEP), the first quantities computed for the first areas (LEP) surrounding the first area (LEP) containing said second area (SEP) are each weighted by using a respective weight which is inversely proportional to the distance between said second area (SEP) and the corresponding first area (LEP).

5. A method as claimed in any one of the foregoing claims, wherein said second quantities are computed for second areas (SEP) empty of buildings.

6. A method as claimed in any one of the foregoing claims, wherein computing a second quantity for a respective second area (SEP) comprises:

- arranging a number of virtual radioelectric signal sources (VRSS) outside the first area (LEP) containing said second area (SEP);

- computing said second quantity as a function of the point strength of a radioelectric signal radiating out from at least one of said virtual radioelectric signal sources (VRSS) and having a propagation path passing through said second area (SEP).

7. A method as claimed in claim 6, wherein the propagation path of the radioelectric signal radiating out from said virtual radioelectric signal source (VRSS)

is the prolongation of a theoretical line linking said radio base station (RBS) and said virtual radioelectric signal source (VRSS).

8. A method as claimed in claim 6 o 7, wherein said virtual radioelectric signal sources (VRSS) are arranged side by side along a line.

9. A method as claimed in claim 8, wherein said virtual radioelectric signal sources (VRSS) are equispatially arranged side by side along said line.

10. A method as claimed in claim 8 or 9, wherein said second areas (SEP) have a polygonal shape, and wherein the distance between two adjacent virtual radioelectric signal sources (VRSS) along said line is correlated to a side of said second areas (SEP).

11. A method as claimed in any one of the foregoing claims 8 to 10, wherein said line is a curved line.

12. A method as claimed in claim 11, wherein said curved line is a circumference arc having center in said radio base station (RBS).

13. A method as claimed in claim 12, wherein said circumference arc has radius (R) equal to the difference between the distance between said radio base station (RBS) and the center (C) of the first area (LEP) containing said second area (SEP) and the distance between the center (C) of said first area (LEP) and said circumference arc.

14. A method as claimed in claim 13, wherein said first areas (LEP) have a square shape, and wherein the distance between the center (C) of said first area (LEP) and said circumference arc is correlated to the diagonal of said first area (LEP).

15. A method as claimed in any of the foregoing claim 12 to 14, wherein ends (A, B) of said circumference arc lie on theoretical lines which link said radio base station (RBS) and corners of the first

area (LEP) containing said second area (SEP) and which correspond to minimum and maximum azimuth angles (φ_{min}, φ_{max}) of said first area (LEP) with respect to said radio base station (RBS).

16. A method as claimed in any one of the foregoing claims 6 to 15, wherein the height of each virtual radioelectric signal source (VRSS) is substantially equal to the sum of the ground altitude with respect to the sea level and the building height within the first area (LEP) containing said virtual radioelectric signal source (VRSS).

17. A method as claimed in any one of the foregoing claims 6 to 16, wherein said virtual radioelectric signal sources (VRSS) radiate a reference power.

18. A method as claimed in any one of the foregoing claims 6 to 17, wherein the power radiated by said virtual radioelectric signal sources (VRSS) is uncorrelated with the power radiated by said radio base station (RBS).

19. A method as claimed in any one of the foregoing claims, wherein said data describing the environment within a first area (LEP) include ground altitude with respect to the sea level, average building height, percentage of the first area occupied by buildings, and vegetation typology.

20. A method as claimed in any one of the foregoing claims, wherein said data describing the environment within a second area (SEP) include ground altitude with respect to the sea level and building height with respect to the ground level.

21. A method as claimed in any one of the foregoing claims, wherein a second quantity for a second area (SEPB) occupied by a building is computed as a function of second quantities computed for second areas (SEPA) surrounding the second area (SEPB) occupied by the

building.

22. A method as claimed in claim 21, wherein a second quantity for a second area (SEPB) occupied by a building is computed as a weighted average of second quantities computed for second areas (SEPA) surrounding the second area (SEPB) occupied by the building.

23. A method as claimed in claim 22, wherein said second quantities computed for second areas (SEPA) surrounding the second area (SEPB) occupied by the building are weighted by using respective weights which are inversely proportional to the squared distances between the second area (SEPB) occupied by the building and the second areas (SEPA) surrounding the second area (SEPB) occupied by the building.

24. A processing system programmed to implement the method according to any one of the foregoing claims.

25. Computer program modules comprising computer program code means, said computer program modules being able, when loaded in a processing system, to implement the method according to any one of the foregoing claims 1 to 23.